

Claims

What is claimed is:

1. A method for client requested external address mapping, said method comprising the steps of:
receiving, from a local host, a request for an access to a public network;
determining a public address to be used for the access to the public network;
mapping a local address, corresponding to the local host, to the public address;
and
returning the public address to the local host.
2. The method of claim 1, wherein the access requested is from the public network to the local host.
3. The method of claim 1, wherein the access requested is from the local host to the public network.
4. The method of claim 1, wherein the public address is an address corresponding to a remote host on the public network.
5. The method of claim 1, further comprising the steps of:
creating a packet having one or more headers and one or more payload areas, the packet to be used in the access; and
placing at least the public address in a given one of the one or more payload areas.
6. The method of claim 5, wherein one or more of the following are encrypted: the one or more headers and the one or more payload areas.
7. The method of claim 1, wherein the public network is defined by one or more sets of addresses.
8. The method of claim 7, wherein the one or more sets of address are defined by one

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or more subnet lists.

9. The method of claim 1, wherein:
 - the step of determining a public address further comprises the step of determining a public port;
 - the step of mapping further comprises the step of mapping the public port to the local host; and
 - the step of returning the public address further comprises the step of returning the public port to the local host.
10. The method of claim 1, wherein:
 - the step of requesting an access to a public network further comprises the step of requesting a port to be used during the access;
 - the step of mapping further comprises the step of mapping the requested port to the local host; and
 - the step of returning the public address further comprises the step of returning the requested port to the local host.
11. The method of claim 1, wherein the step of mapping further comprises the steps of determining an identification for the local host and returning the identification to the local host.
12. The method of claim 1, wherein the step of mapping further comprises the steps of determining a local subnet list for the local host and returning the local subnet list to the local host.
13. The method of claim 12, wherein the local subnet list defines a local network, thereby distinguishing the local network from the public network.
14. The method of claim 1, wherein:
 - the access is from the local host to the public network;
 - the access comprises the local address and a local port; and

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the method further comprises the steps of:

modifying the local address to be the public address; and

modifying, if necessary, the local port to be a public port corresponding to a public host.

15. The method of claim 1, wherein:

the access is from the public network to the local host;

the access comprises a second public address and a public port; and

the method further comprises the steps of:

modifying the second public address to be the local address; and

modifying, if necessary, the public port to be a local port corresponding to the local host.

16. A system for client requested external address mapping, comprising:

a memory; and

at least one processor, coupled to the memory, operative to:

receive, from a local host, a request for an access to a public network;

determine a public address to be used for the access to the public network;

map a local address, corresponding to the local host, to the public address;

and

return the public address to the local host.

17. A method for client requested external address mapping, said method comprising the steps of:

determining whether an outbound access is to a local network or a public network;

and

when the outbound access is to a public network, performing the steps of:

requesting an access to the public network;

receiving public information in response to the request; and

placing the public information in one or more payload portions of one or more packets created for the outbound access.

18. The method of claim 17, wherein the public information comprises a public address.

19. The method of claim 17, wherein the public information comprises a public port.

20. The method of claim 17, wherein the step of requesting an access to the public network further comprises the step of requesting a local port, and wherein the step of placing the public information in a payload further comprises the step of placing the requested local port in the payload.

21. The method of claim 17, further comprising the step of performing the outbound access to the public network, wherein the outbound access uses one or more of the following protocols: file transfer protocol (FTP) request for comment (RFC) 959; H.323 international telecommunications union (ITU) standard; session initiation protocol (SIP) RFC 2543; resource reservation protocol (RSIP) RFC 2205; internet protocol encapsulation security protocol (IPsec-ESP) RFC 2402; kerberos 4; kerberos 5; telnet RFC 854; and rlogin RFC 1282.

22. The method of claim 17, wherein an application performs the steps of determining, requesting, receiving, and placing, and wherein the application is one or more of the following: a peer-to-peer application; an application requiring retention of address mapping; a remote shell (RSH) application; an X window system application; and an X-term application.